

### **DETAILED ACTION**

1. This office action correspondence is a response to the applicant's amendment filed on 03/17/2009. After reconsideration of the applicant's amendment filed on 03/17/2009, further search and through examination of the present application, claims 1-4,6-21,23-31,36-39 are found to be in condition for allowance over prior arts of record. Claims 5,22,32-35 are canceled and 37-39 newly added.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jonathan Berschadsky on May 18, 2009.

The applicant has been amended as follows:

**Claim 1(Currently Amended)** A method of scrambling a digital signal, comprising the steps of:

decomposing the digital signal into a plurality of regions, each region containing digital data;

encoding the digital signal in a format comprising header data specific to each region, the header data including a parameter representing a number of bitplanes of samples of a corresponding region; and

modifying the parameter to cause an erroneous value of an amplitude of the samples, thereby causing the digital signal to be degraded,

wherein the digital data of the digital signal are digital samples representing physical quantities, and

wherein the number of bitplanes includes a number of zero bitplanes and a number of non-zero bitplanes, and the number of bitplanes are encoded based on the difference between (1) a number of reference bitplanes and (2) the number of zero bitplanes.

**Claim 10 (Currently Amended)** A method of descrambling a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding, the method comprising the steps of:

receiving [[the]] a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding, wherein the digital data of the digital signal are digital samples representing physical quantities, and wherein the modified version of the parameter includes a

Art Unit: 2436

modified number of bitplanes including a modified number of zero bitplanes and a number of non-zero bitplanes, and the modified number of bitplanes are encoded based on the difference between (1) a number of reference bitplanes and (2) the modified number of zero bitplanes; and modifying in reverse the modified version of the parameter to restore the parameter representing a number of bitplanes of samples of a corresponding region.

**Claim 18 (Currently Amended)** A device for scrambling a digital signal, comprising:

a processor coupled to a memory storing code, which when executed by the processor, causes the processor to perform the steps of:

decomposing the digital signal into a plurality of regions, each region containing digital data;

encoding the digital signal in a format comprising header data specific to each region, the header data including a parameter representing a number of bitplanes of samples of a corresponding region; and

modifying, the parameter to cause an erroneous value of an amplitude of the samples, thereby causing the digital signal to be degraded,

wherein the digital data of the signal are digital samples representing physical quantities, and

wherein the number of bitplanes includes a number of zero bitplanes and a number of non-zero bitplanes, and the number of bitplanes are encoded based on the difference between (1) a number of reference bitplanes and (2) the number of zero bitplanes.

**Claim 31 (Currently Amended)** A computer-readable medium information storage means which can be read by a computer or a microprocessor, the computer-readable medium storing code instructions of a computer program, which when executed by the computer or microprocessor, cause the computer or microprocessor to execute the steps of a method of descrambling a digital signal ~~decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding,~~ the method comprising the steps of:

receiving ~~[[the]]~~ a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding, wherein the digital data of the digital signal are digital samples representing physical quantities, and wherein the number of bitplanes includes a number of zero

Art Unit: 2436

bitplanes and a number of non-zero bitplanes, and the number of bitplanes are encoded based on the difference between (1) a number of reference bitplanes and (2) the number of zero bitplanes;  
and

modifying in reverse the modified version of the parameter to restore the parameter representing a number of bitplanes of samples of a corresponding region.

**Please delete claims 2, 11, and 19.**

**In claim 12 line 1 please delete “11” and insert “10”**

**In claim 13 line 1 please delete “12” and insert “10”**

*Allowable Subject Matter*

3. Claims 1,18,30 are patentable over the closest references Kayaman et al (hereinafter referred as Kayama) US Pub No 2002/0027994 in view of Wee (hereinafter referred as Wee) US Pub No 7,184,548 B2 and further view of Yoshida(US Patent No 4,685,098) because the combinations of the prior art do not anticipate nor fairly and reasonably teach a method/apparatus/computer-readable medium of scrambling a digital signal, comprising the steps of:

decomposing the digital signal into a plurality of regions, each region containing digital data;

encoding the digital signal in a format comprising header data specific to each region, the header data including a parameter representing a number of bitplanes of samples of a corresponding region; and

modifying the parameter to cause an erroneous value of an amplitude of the samples, thereby causing the digital signal to be degraded,

wherein the digital data of the digital signal are digital samples representing physical quantities, and

wherein the number of bitplanes includes a number of zero bitplanes and a number of non-zero bitplanes, and the number of bitplanes are encoded based on the difference between (1) a number of reference bitplanes and (2) the number of zero bitplanes.

4. Claims 10,27,31 are patentable over the closest references Kayaman et al (hereinafter referred as Kayama) US Pub No 2002/0027994 in view of Wee(hereinafter referred as Wee) US Pub No 7,184,548 B2 and further view of Yoshida(US Patent No 4,685,098) because the combinations of the prior art do not anticipate nor fairly and reasonably teach a method of descrambling a digital signal, the method comprising the steps of:

receiving a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding, wherein the digital data of the digital signal are digital samples representing physical quantities, and wherein the modified version of the parameter includes a modified number of bitplanes including a modified number of zero bitplanes and a number of non-zero bitplanes, and the modified number of bitplanes are encoded based on the difference between (1) a number of reference bitplanes and (2) the modified number of zero bitplanes; and modifying in reverse the modified version of the parameter to restore the parameter representing a number of bitplanes of samples of a corresponding region.

*Conclusion*

6. Claims 1,3-4,6-10,12-18,20-21,23-31,36-39 are patentable. Claims 2, 5,11,19,22,32-35

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays should be clearly labeled “Comments on statement of Reasons for allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fikremariam Yalew whose telephone number is 5712723852. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Moazzami Nasser, can be reached on 5712738300. The fax phone number for the organization where this application or proceeding is assigned is 571-272-4195.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fikremariam Yalew/

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Application/Control Number: 10/621,418

Page 9

Art Unit: 2436

Examiner, Art Unit 2436  
06/22/2009

Supervisory Patent Examiner, Art Unit  
2436